

REMARKS

Claims 1-33 are currently pending in this application. Claim 29 has been amended to correct a typographical error.

Specification

Applicants have amended the specification to correct typographical and grammar errors as requested by the Examiner. Applicants will continue to correct any such errors that they become aware of in the specification and/or claims. Applicants believe that there are no copending applications whose status needs to be updated at this time; however Applicants will do so in a timely manner if it becomes necessary as requested by the Examiner.

Preliminary Amendment

Applicants thanks the Examiner for waiving the requirement in the Preliminary Amendment to present claim modifiers which relate only to the application as filed and not to the application as prosecuted in the International Stage. Applicants have taken care to present the correct claim identifiers.

Rejections Under 35 USC §112

Claims 1-33 are rejected under 35 USC §112, as failing to comply with the written description requirement. The Examiner states that 2.340 nm is not in the original specification. Applicants have amended claim 1 to recite 2.345 nm, which as noted by the Examiner is in the original specification. Applicants believe this amendment obviates the rejection.

Claims 1-33 are also rejected 35 USC §112, as allegedly failing to comply with the enablement requirement. Specifically, the Examiner contends that the specification does not reasonably provide enablement for the recitation of 4-15% rare earth content by weight. Applicants disagree that the specification does not enable a person skilled in the art to make and use the invention commensurate with the scope of the claims and traverse this rejection. The zeolite effected in Example 1 of has a rare-earth content of 4 % by weight, and the zeolite effected in Example 5 has a rare-earth content of 15% by weight. The corresponding catalysts were prepared in Examples 8 and 12. From this, one of skill in the art would

understand how to make and use the composition as claimed having a rear-earth content of from about 4-15% by weight.

Accordingly, Applicants request that the Examiner withdraw these rejections.

Rejections Under 35 USC §102

Claims 1-33 are rejected under 35 USC §102(a) as being anticipated by U.S. Patent Publication No. 2003/0064881 to Du et al. (“the Du reference”).

The term “others” in 35 USC U.S.C. 102(a) refers to any entity which is different from the inventive entity. See MPEP 2132. The Du reference lists the same inventive entity as the instant application. Accordingly, Applicants submit that it does not qualify as prior art under 35 §102(a). Applicants also submit that the Du reference is not prior art under any other section of 35 USC §102.

With regard to 35 USC §102(b), in particular, Applicants submit that the publication date of the Du reference (April 3, 2003) is within one year of the international filing date of October 26, 2003 that the present application claims priority to under 35 USC § 365 and so the Du reference is not prior art under §102(b). Applicants also note that the international application filed on October 26, 2003 was filed with a translation in accordance with 35 USC § 365 and MPEP 201.13(b).

Rejections Under 35 USC §103

Claims 1-33 are rejected under 35 USC §103(a) as being obvious over the Du reference. As described above, Applicants believe the Du reference is not prior art under any section of 35 USC §102, and thus cannot be used as the basis for a rejection under 35 USC §103.

Claims 1-14 are rejected under 35 USC §103(a) as being obvious over U.S. Patent No. 5,535,817 to Dunne (“Dunne”).

Claim 1 recites a catalyst having a “unit cell size above 2.436 under an aging condition of 800°C/17 hours, 100%.” This feature an indication of the structural stability of the claimed catalyst and is neither disclosed nor suggested by Dunne. A cracking catalyst requires not only good stability and ability to resist high temperatures, but also the ability to resist steam inactivation at such temperatures. Hydrothermal stability is an indicator of the degree of activity of a catalyst in simulated operation conditions. For cracking catalysts

containing zeolite, an evaluation at 800°C, 100% steam for 17 hours is conducted is commonly conducted to measure such hydrothermal stability.

The treatment of the rare earth-containing zeolite Y with gaseous silicon tetrachloride, a feature not disclosed in Dunne, results in unique properties of the present invention that are not inherently present in products made without the reaction of gaseous silicon chloride (such as the catalysts in Dunne), namely a “unit cell size above 2.436 under an aging condition of 800°C/17 hours, 100%.” See Table 1 of the specification, which shows embodiments of the invention have a unit cell size above 2.435 nm under the recited aging condition. By contrast, the comparative samples, without gaseous silicon tetrachloride treatment have a unit cell size of less than 2.435 nm under the claimed aging condition. Because of this difference in products made by different methods, the recited property of “unit cell size above 2.436 under an aging condition of 800°C/17 hours, 100%” is not inherently disclosed in Dunne.

Note that the use of hydrothermal methods with multiple ion exchange between ammonium ion and rare-earth ion and high-temperature calcination usually leads to the collapse of the crystal lattice of REY and REHY zeolite (see paragraph 8 of Applicants’ specification). The catalyst in Dunne is obtained by calcining the catalyst in dry air (see col. 5 and Example 1). One of skill in the art would thus expect that under the condition of 800°C/17 hours, 100%, the catalyst of Dunne would collapse.

Therefore Dunne neither discloses nor suggests the hydrothermal stability of the present catalyst, specifically the “unit cell size above 2.436 under an aging condition of 800°C/17 hours, 100%.” One of skill in the art would not expect such effects and would consider the present results to be surprising based on the teachings of the prior art.

For at least these reasons, Applicants submit that claim 1 and its dependent claims are patentable over Dunne, and request that the Examiner remove the rejections.

Double Patenting

Claims 1-32 are rejected on the ground of non-statutory obviousness-type double patenting over claims 1-8 of U.S. Patent No. 6,787,123. (The Office Action states that the rejection is over U.S. Patent No. 6,787,132, but as that patent relates to chemo-immunotherapy, Applicants are treating the rejection as being over claims 1-8 of U.S. Patent No. 6,787,123.) Without agreeing or commenting on the substantive rejection, Applicants are submitting a Terminal Disclaimer to overcome the rejection.

Conclusion

Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below.

Respectfully submitted,
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